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## A Revision of the Family Pselaphidae (Coleoptera) from Chejudo Island, Korea <sup>1), 2)</sup>

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### **Abstract.**

Pselaphids from Chejudo Island, Southern Korea comprises ten species, in which eight species are newly described together with **illustrations** of their important characters.

### **Introduction**

The pselaphid fauna is so poorly known in southern part of Korea as Cho (1957) recorded **only** one species ***Poroderus armatus*** (Sharp) from this area. This report treats the Pselaphidae of Chejudo Island as the first part of the revision on the Pselaphidae of Southern Korea. It presents ten pselaphid species as **follows**, in which eight species are new to science.

Subfamily BATRISINAE Reitter

Tribe **Batrisini** s. str.

Genus ***Basitrodes*** Jeannel

***Basitrodes*** Jeannel, 1958, **Mém.** Mus. nat. Hist., Paris, 18(1): 26; Newton & Chandler, 1989, Field. **Zool.**, N. S., (53): 33. Type species: ***Batrisus vestitus*** Sharp, by **original** designation.

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1) Results from the Korea-Japan Co-operative Science Program on "The Evolution and Biogeography of the Insects in the East Asia". No. 6.

2) Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 4, No. 40).

*Basitrodes leptothorax* sp. nov.

(Fig. 1A-C)

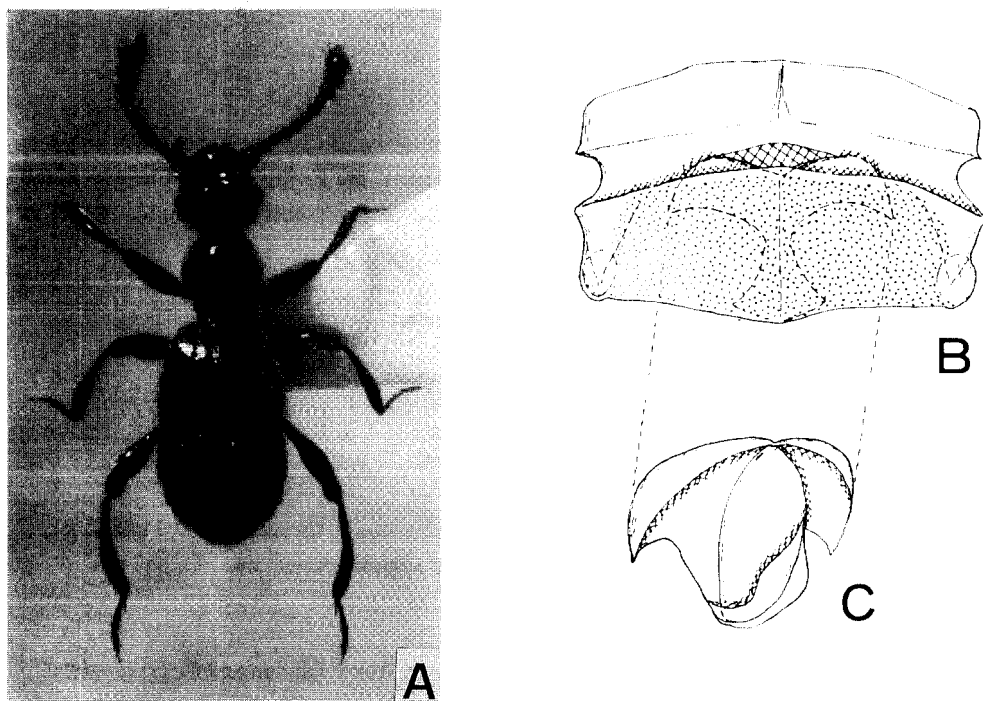
Male. Unknown.

Female. Length 2.1-2.2 mm. Width 0.7 mm.

Body reddish brown, elongate and weakly broadened posteriorly.

Head slightly wider than long, clypeus broad, strongly projected anteriorly, **limbate** at its margin, **frons** depressed and glabrous at the median part, thickened and coarsely punctuate at both lateral parts, vertex weakly convex, minutely punctuate and shiny, with a pair of large tentorial pits. Eyes small, each ovoid, composed of about 15 facets. Antennae moniliform, reaching hind margin of pronotum, 1st segment thick and subcylindrical, 2nd ovoid, 3rd to 8th **subequal** in length, each subglobose, 9th to 10th thick, ovoid and transverse, 11th largest and ovoid, pointed at apex; relative lengths (widths) of each segment from base to apex are 2.0 (1.8): 1.5 (1.0): 1.0 (1.0): 1.0 (1.1): 1.0 (1.1): 1.0 (1.0): 1.0 (1.1): 1.0 (1.0): 1.3 (1.5): 1.5 (2.0): 3.2 (2.3).

Pronotum narrower than head, clearly longer than wide, widest at the middle, minutely punctuate and shiny with a shallow median longitudinal sulcus, a pair of lateral sulci and a pair of large crooked spines at anterior **2/5**. Elytra wider than long, weakly convex, sparsely punctuate, each elytron with 3 basidorsal foveae and 2 longitudinal sulci, outer sulcus reaching the middle of elytron. Legs elongate, thickened in femora, hind tibiae each slender, curved internally and thickened in apical **2/5** with a spur at apex.



**Fig. 1.** *Basitrodes leptothorax* sp. nov., female. A, dorsal aspect; B, 9th abdominal sternite in ventral view; C, genital plate.

Abdomen as wide as elytra, rounded posteriorly, 4th segment largest and transverse, with a pair of short basimedial carinae, a pair of lateral carinae and 2 pairs of basidorsal foveae, each lateral **carina** obliquely running from outer basidorsal fovea to posterolateral corner of the segment, 5th to 6th short, **subequal** in length, 7th twice as long as 6th, 8th **tergite** transverse, rounded at apical margin, 8th sternite semicircular, flattened at median part. Female genitalia consisting of 9th sternite and genital plate, 9th sternite transverse and constricted in the middle part, genital plate T-shaped in ventral view, median wall ovoid in lateral view.

**Remarks.** This species is very similar to the genus *Petaloscopus* in having the well-projected clypeus, the **frons** with a pair of nodules on both sides and the pronotum with a pair of well-projected dorsomedian spines. Especially, it is very resemble with *P.* sp. distributed in Tsushima Is. in having the elongate **prothorax**.

**Distribution.** Southern Korea (Chejudo Is.)

Holotype: female (deposited in Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo Is., 24. vii. 1990, S. Nomura leg. Paratopotypes: 6 females, same data as **holotype**.

#### Genus *Batriscenellus* Jeannel

*Batriscenellus* Jeannel, 1958, *Mém. Mus. nat. Hist., Paris*, (A), 18: 60; Newton & Chandler, 1989, *Field.*

*Zool., N. S.*, (53): 34; Nomura, 1991, *Esakia, Fukuoka*, (31): 299. Type species: *Batriscus fragilis*

Sharp, by original designation.

This genus is characterized by the **first antennal** segment with a semihyaline conical trichome at the external side as in the African genus *Arthromelus* Jeannel, and the Oriental *Batrisiella* Raffray.

#### Subgenus *Batriscenellus* s. str.

This **nominotypical** subgenus was redefined by Nomura, 1991 based on the following two characters: the sexual patch consisting of a pair of setiferous patches on the fifth abdominal segment, a fringe consisting of bold setae on the fifth segment, and the large and deep excavation including secretory setae on the sixth, and the basal bulb of the male genitalia with a well-projected articulate process.

#### *Batriscenellus vicarius* Löbl, stat. nov.

(Fig. 3A)

*Batriscenellus japonicus vicarius* Löbl, 1973, *Ann. Zool., Warszawa*, 30(9): 322; Kurbatov, 1990, *Rev.*

*Ent. URSS*, 69(1): 75; Nomura, 1991, *Esakia, Fukuoka*, (31): 302.

**Remarks.** This was described as a subspecies of *B. japonicus* (Sharp) by Löbl, 1973, but is better to rank a distinct species because of its unique characters, i. e. the large abdomen, the 7th to 8th abdominal sternites each with a pair of densely haired longitudinal carinae, and the male genitalia with a dorsally expanded basal bulb.

This species is distributed in broad area including two islands, Chejudo, Korea and Tsushima, Japan, and clearly separated from the ranges of *B. japonicus* (Sharp) and allies.

**Distribution.** Southern Korea (Chejudo Is.), Northern Korea, Russia (Primorye) and Japan (Tsu-shima Is.)

**Specimens examined:** 1 male and 2 females, Yongshil, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg.; 3 males, same locality as above, 24. vii. 1990, S. Nomura leg.; 1 male 2 females, Kaewol Bridge, Mt. Hallasan, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 5 males 7 females, Kuwanum Temple, Mt. Hallasan, Chejudo Is., 29. ix. 1990, S. Nomura leg.

Subfamily **GONIACERINAE** Reitter

Tribe **Tanypleurini** Jeannel

Genus ***Machulkaia*** Löbl

*Machulkaia* Löbl, 1964, *Annot. zool. bot.*, (5): 1; Newton & Chandler, 1989, *Field., Zool., N. S.*, (53): 51.

Type species: *Machulkaia mirabilis* Löbl, by monotypy.

The genus *Machulkaia* has a close relation with the genera *Takaorites* Jeannel, *Nipponobythus* Jeannel and *Bithiotes* Newton & Chandler (renamed for the homonym *Bythonesiotes*, Jeannel, 1958) to form a genus-group. This genus-group is restricted to East Asia in their distribution, and is characterized by the frons with a sexual patch including secretory setae and the pronotum with an antebasal transverse sulcus.

***Machulkaia dolharubang* sp. nov.**

(Fig. 2A-E, 3B)

**Male.** Length 1.8-1.9 mm. Width 0.8 mm.

Body reddish brown, broadened posteriorly.

Head wider than long, nearly pentagonal, clypeus convex anterodorsally, **limbate** on anterior margin, frons widely excavated, median excavation transverse and deep with a pair of trichomes at median part of its hind margin, lateral excavations paired, ovoid and located on both posterolateral sides of the median excavation, each covered with short secretory setae on its bottom, vertex convex, shallowly depressed on anteromedian part, dorsal tentorial pits indistinct, tempora very broad and rounded. **Eyes** each small and ovoid, composed of about 15 facets. Antennae short, reached basal margin of elytra, bent outward at 7th segment, 1st segment large, slightly broadened posteriorly, flattened dorsally, 2nd to 3rd each ovoid, longer than wide, 4th to 7th subequal, each subglobose, 8th smallest and subglobose, 9th ovoid, longer than wide, 10th transverse, 11th largest, subcylindrical in basal part, subconical in apical part.

Pronotum as wide as head, wider than long, minutely punctuate and shiny with a transverse sulcus at posterior 1/4. Elytra wider than long, narrowed anteriorly, nearly convex, sparsely punctuate. Legs elongate, hind tibiae slender, each swollen and curved internally in apical 2/5.

Abdomen about as wide as elytra, 4th segment largest, slightly broadened posteriorly with a pair of subparallel basal carinae in basal 3/5, 5th to 7th short, **subequal** in length, 8th tergite transverse, arcuate on posterior margin, 8th sternite E-shaped, median stalk shorter than each lateral stalk, slightly **broad-**

erred anteriorly, weakly curved rightward, hind part arcuate and pubescent, 9th sternite composed of a pair of slender sclerites.

Male genitalia weakly sclerotized and ovoid, parameres elongate, divergent **apically**, median lobe bulbous in basal part with an arrow-shaped sclerite in median part of apex, and with a pair of large projections on both lateral part of apex, each projection with beak-shaped sclerite. Endophallus composed of 4 large spines, 2 long spines each weakly curved, a short spine and an arcuate spine.

**Female.** Length 1.7-1.9 mm. Width 0.7-0.8 mm.

Similar to male excepting the following characters: Head trapezoid, broadened posteriorly, **frons** without excavation, broadly flattened and pubescent, with a weak transverse sulcus, vertex broad and weakly convex, with a longitudinal **carina** and a pair of distinct dorsal tentorial pits. Antennae slightly shorter than those of male, 7th segment normally subglobose.

Remarks. *Machulkaia dolharubang* sp. nov. is closely related to *M. mirabilis* Löbl described from Chekiang, Eastern China, but is distinguished from the latter by the each subglobose fourth to seventh antennal segments (each transformed in the latter species).

**Distribution.** Southern Korea (Chejudo Is.).

Holotype: male (deposited in Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg. Paratypes: 2 males and 1 female, same data as holotype; 11 males 3 females, same locality as holotype, 24. vii. 1990, S. Nomura leg.; 1 male, Orimok, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg.; 15 males 6 females, same locality as above, 27. vii. 1990, S. Nomura leg.; 7 males 1 female,

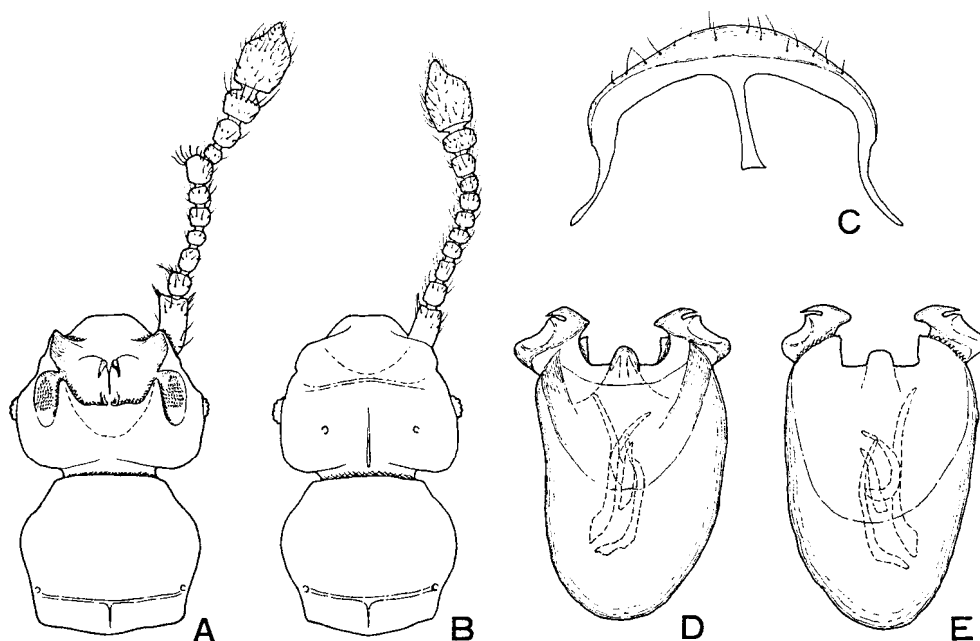


Fig. 2. *Machulkaia dolharubang* sp. nov. A, C-E, male; B, female. A, B, head and pronotum in dorsal view; C, 8th sternite in ventral view; D, male genitalia in ventral view, E, ditto in dorsal view.

Kaewol Bridge, Mt. **Hallasan**, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 3 males, Songp'anak, Mt. **Hallasan**, Chejudo Is., 28. ix. 1990, S. Nomura leg.; 1 **male** 1 female, Kuwanum Temple, Mt. **Hallasan**, Chejudo Is., 29. ix. 1990, S. Nomura leg.

Genus *Triomicrus* Sharp

*Triomicrus* Sharp, 1883, Trans. ent. Soc. London, 1883: 325; Raffray, 1904, Ann. Soc. ent. Fr., 73: 338; 1908, Psel., Gen. Ins.: 252; Jeannel, 1958, Mtm. Mus. nat. Hist., Paris, (A), 18: 69; Newton & Chandler, 1989, Field., Zool., N. S., (53): 51. Type species: *Bryaxis protervus* Sharp, designated by Lucas, 1920.

*Trimiomiscus*; Raffray, 1911, Psel., Coleopt. Cat., (27): 110; Newton & Chandler, 1989, l. c.: 52 (misspelling of *Triomicrus*)

The genus *Triomicrus* including seven species is recorded from Japan, China and Seychelles. The morphological similarity with the tribe Brachyglutini is suggested by Tanokuchi, 1985 and Ohishi, 1986. Thus the systematic position of this genus is doubtful. It is very distinct in this tribe in having the **ventrally** folded seventh to eighth abdominal segments with asymmetrical sternites.

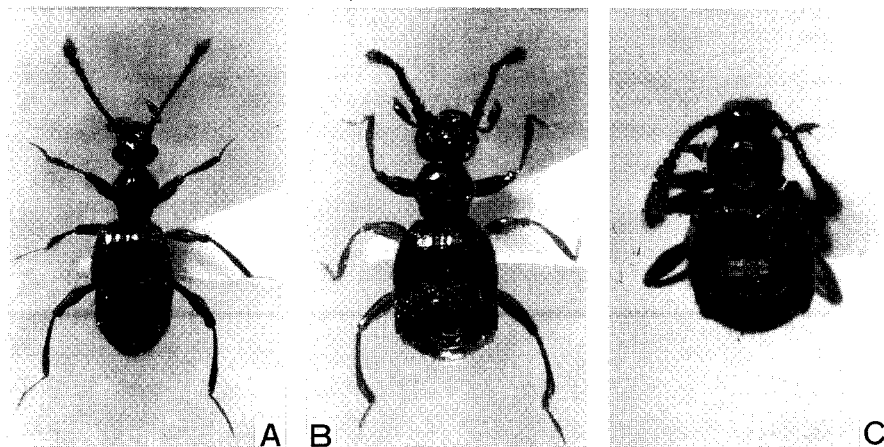
*Triomicrus penicilatus* sp. nov.

(Fig. 3C, 4A-G)

**Male.** Length 1.5 mm. Width 0.6 mm.

Body reddish brown and shiny, broadened and thickened in elytra and abdomen.

Head longer than wide, ovoid, minutely punctuate on dorsal surface, clypeus large, arcuate on anterior margin, frons broad, weakly concave at median part, with a median fovea at center, vertex slightly convex, weakly concave around both tentorial pits, ventromedian surface of genae with gular suture (extent **genal** area because of the reduction of the gular area) strongly expanded. Eyes well-developed and ovoid, each composed of about 20 facets. Antennae elongate, reaching base of elytra, 1st segment

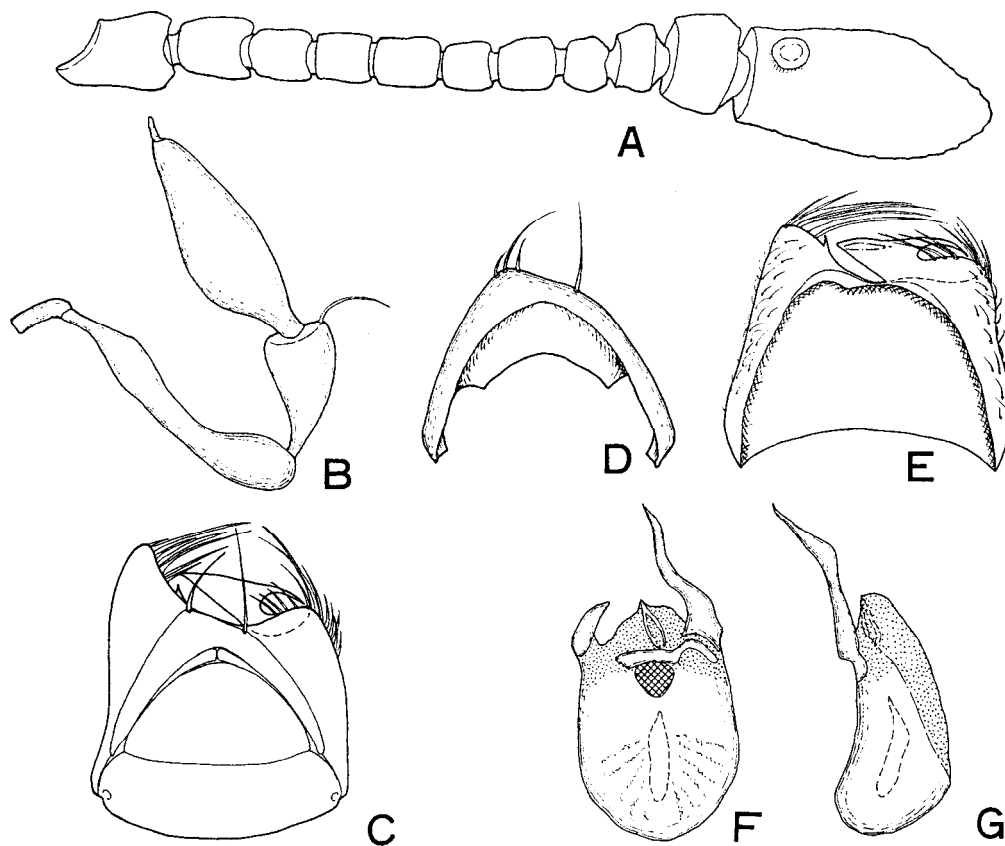


**Fig. 3.** A, *Batriscenellus vicarius* Löbl, male; B, *Machulkaia dolharubang* sp. nov., male; C, *Triomicrus penicilatus* sp. nov., female.

thick and subcylindrical, 2nd to 7th each longer than wide, subcylindrical, 8th subglobose, 9th to 10th each slightly transverse and thickened distally, 11th largest, twice as long as wide, widest at apical  $3/7$ , weakly excavated at ventroapical part, with a short and subcylindrical process at antebasal part of inner side. Maxillary palpi long and elongate, 1st segment short and tubular, 2nd very long, swollen at basal  $1/4$  and apical  $1/5$ , 3rd short, wider than 2nd, narrowed at base, thickened distally, with a long seta at outer part of its apex, 4th slightly shorter than 2nd, as wide as 3rd, fusiform and pedunculate, with a very short palpal spine.

Pronotum subglobose, widest at middle, with 3 antebasal foveae and minute and sparse punctures. Elytra slightly wider than long, moderately convex and weakly broadened posteriorly, each elytron with 2 basal foveae and 2 sulci, outer sulcus running from outer basal fovea to posterior  $1/5$ . Metasternum broad, weakly concave at median part, with a pair of spines at just inside of metacoxae, each spine strongly curved anteriorly, acute and ciliate at apex. Legs long and slender, fore tibiae elongate, each thickened toward apex, with dense short setae in apical  $1/5$ .

Abdomen short and rounded posteriorly, 4th segment largest, transverse and narrowed posteriorly,



**Fig. 4.** *Triomicrus penicilatus* sp. nov., male. A, antenna; B, maxillary palpus; C, 7th to 8th abdominal segments in ventral view; D, 7th sternite; E, 8th sternite; F, male genitalia in ventral view, G, ditto, in lateral view.



with 3 basal foveae, median fovea 1/10 as wide as the segment, 5th to 6th short, 7th to 8th folded into ventral side, 7th tergite transverse and shortest, 7th sternite very large and asymmetrical, with a pair of apical processes, right process longer than the left, with very long setae at inner side of its apex, left process very broad, with long setae on apical side and with large and lamellar extension on inner side, 8th tergite almost triangular, 8th sternite attached to ventral side of 7th sternite, U-shaped and asymmetrical, expanded apically on its left side, with a pair of long and a few short setae, 9th sternite reduced into a pair of very short and slender sclerites, attached onto both sides of male genitalia.

Male genitalia composed of well-sclerotized parameres and weakly sclerotized median lobe, parameres asymmetrical, right paramere large and elongate, broadened basally, acute at apex, weakly winded in ventral view, left paramere short, slightly narrowed apically, median lobe ovoid, with very small and ovoid basal foramen and endophallus, endophallus composed of 2 spines on its median line, apical spine short and fusiform, basal spine long and well-sclerotized.

Female. Length 1.5 mm. width 0.6 mm. Very similar to male but differs from the following characters: Eyes smaller than male, each composed of about 17 facets; 11th antennal segment without subcylindrical process; metasternum weakly convex, without spines on inside of metacoxae; 7th to 8th abdominal segments normal, 7th to 8th sternites each short, transverse and symmetrical.

Remarks. This new species *T. peoicilatus* is much similar to *T. sublaevis* Raffray in having the sparsely punctuate pronotum and the long hind legs. But it differs from the latter by the longer right plate of the ninth sternite than the left (The left plate is longer than the right in *T. sublaevis*).

**Distribution.** Southern Korea (Chejudo Is.).

Holotype: male (deposited in Kyungpook Nat. Univ.), Kuwanum Temple, Mt. Hallasan, Chejudo Is., 29. ix. 1990, S. Nomura leg. Paratype: 1 female, Orimok, Mt. Hallasan, Chejudo Is., 27. vii. 1990, S. Nomura leg

#### Tribe **Bythinini** Raffray

#### Genus **Bryaxis** Kugelann

*Bryaxis* Kugelann, 1794, Neuest. Mag. Lieb. Ent., 1: 580; Raffray, 1904, Ann. Soc. ent. Fr., 73: 395; 1908, Col., Psel., Gen., Ins.: 275; 1911, Psel., Coleopt. Cat., (27): 115; Jeannel, 1958, Mtm. Mus. nat. Hist., Paris, (A), 18: 85; ICZN, 1969, Bull. Zool. Nom., 26: 133 (type species designated); Besuchet, 1974a, Käf. Mitteleurop., 5: 338; Besuchet, 1974b, Misc. Zool., 3(4): 68; Newton & Chandler, 1989, Field., Zool., (53): 47. Type species: *Pselaphus bulbifer* Reichenbach, designated by ICZN, 1969.

*Arcopagus* Leach, 1817, Zool. Misc., 3: 83; Jeannel, 1950, Col. Psel., Faun. Fr., 53: 231; Besuchet, 1974a, 1. c.: 338 (synonymized); 1974b, 1. c.: 68.

*Kunzea* Leach, 1826, Zool. Journ., 2: 448; Besuchet, 1974b, 1. c.: 68 (synonymized). Type species: *Kunzea nigriceps* Leach, by monotypy.

*Picnogyne* Gozis, 1886, Rect. syn. not. div., Herbii Montlucon, France: 16; Newton & Chandler, 1989, Field., Zool., N. S., (53): 47 (synonymized). Type species: *Bythinus pandellei* Saulcy, by original designation.

- Bythobletus* Reitter, 1909, **Faun. Germ.**, Stuttgart: 214; Jeannel, 1950, l. c.: 231(as subg. of *Arcopagus*); 1958, l. c.: 85 (as subg. of *Bryaxis*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68.
- Megalobythus* Jeannel, 1922, **Bul. Soc. Stiinte din Cluj**, 1: 232; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Megalobythus goliath* Jeannel, by monotypy.
- Embolobythus* Jeannel, 1950, l. c.: 231(as subg. of *Arcopagus*); Besuchet, 1974a, l. c.: 338(synonymized); 1974b, l. c.: 68. Type species: *Bythinus curtisi* Leach, by original designation.
- Bythinites* Jeannel, 1950, l. c.: 231(as subg. of *Arcopagus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus latebrosus* Reitter, by original designation.
- Bythinidius* Jeannel, 1950, l. c.: 231(as subg. of *Arcopagus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus crassicornis* of authors (= *Bythinus glabricollis* Schmidt-Gbbel, teste C. Besuchet)
- Pyreneobythus* Jeannel, 1950, l. c.: 231(as subg. of *Arcopagus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus pandellei* Saulcy, by original designation.
- Bythinomorphus* Jeannel, 1950, l. c.: 275; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus fagei* Jeannel, by original designation.
- Parabythinus* Jeannel, 1950, l. c.: 220; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus pyrenaicus* Saulcy, by original designation.
- Jugobythus* Karaman, 1953, **Act. Mus. Maced. Sci. Nat.**, Scopje, 1: 92 (as subg. of *Arcopagus*); Besuchet, 1974, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum* ).
- Balkanobythus* Karaman, 1954, **Act. Mus. Maced. sci. nat.**, Scopje, 2: 83; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum* ).
- Erichobythus* Karaman, 1954, l. c.: 81 (as subg. of *Bythinites*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum* ).
- Bajulobythus* Karaman, 1954, l. c.: 86 (as subg. of *Arcopagus*); 1957, **Biol. Glasnik**, 10: 171 (as subg. of *Balkanobythus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68 (synonymized as *nomen nudum*).
- Argiobythus* Karaman, 1957, **Biol. Glasnik**, 10: 173; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus peloponnesius* Reitter, by original description.
- Balkanobythus* Karaman, 1957, l. c.: 170; Newton & Chandler, 1989, l. c.: 47 (synonymized). Type species: *Bythinus lokayi* Machulka, by original designation.
- Illyrobythus* Karaman, 1957, l. c.: 172; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus longulus* Kiesenwetter, by monotypy.
- Plattibythus* Karaman, 1957, l. c.: 173; Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68. Type species: *Bythinus verrucipalpus* Apferbeck, by original designation.
- Parabythus* Karaman, 1957, l. c.: 174; Newton & Chandler, 1989, l. c.: 47 (misspelling of *Parabythinus* Jeannel).
- Clavidius* Karaman, 1957, l. c.: 168 (as subg. of *Arcopagus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum*).
- Dalmatobythus* Karaman, 1957, l. c.: 173 (as subg. of *Argiobythus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum* ).
- Orientobythus* Karaman, 1957, l. c.: 168 (as subg. of *Arwpagus*); Besuchet, 1974a, l. c.: 338 (synonymized); 1974b, l. c.: 68; Newton & Chandler, 1989, l. c.: 6 (*nomen nudum* ).

*Iberobythus* Franz, 1958, Eos, 34: 123; Besuchet, 1974a, 1. c.: 338 (synonymized); 1974b, 1. c.: 68 (synonym mixed). Type species: *Bryaxis crotchi* Sharp, by original designation.

*Arcobythus* Jeannel, 1958, 1. c.: 85 (subgenus). Type species: *Bryaxis frontalis* Jeannel, by original designation.

*Bythiniana* Jeannel, 1958, Mtm. Mus. nat. Hist., Paris, (A), 18: 85 (subgenus).

*Bythinopsidius* Meggiolaro, 1960, Boll. Soc. ent. Ital., 90: 60; Besuchet, 1974a, 1. c.: 338 (synonymized); 1974b, 1. c.: 68 (synonymized). Type species: *Bythinus pentagonoceras* Stolz, by monotypy.

The genus *Bryaxis* is composed of many species and diversified all over the Palearctic Region. This genus is characterized by having the swollen first or second antennal segment in the male. According to Jeannel, 1958, the Oriental components of this genus are classified into three subgenera, *Arcobythus* Jeannel, *Bythiniana* Jeannel and *Bythobletus* Reitter, in which the following two subgenus were found on Chejudo Island.

#### Subgenus *Bythiniana* Jeannel

*Bythiniana* Jeannel, 1958, Mém. Mus. nat. Hist., Paris, (A), 18: 85 (subgenus); Newton & Chandler, 1989, Field., Zool., (53): 47. Type species: *Bryaxis japonicus* Sharp, by original designation.

This subgenus is characterized by the swollen second antennal segment which is sometimes having a well-projected secretory organ and by the smooth second to third segments of maxillary palpus. Though the subgenus was established on the Japanese species, it is widely distributed in East Asia.

#### *Bryaxis hallamontanus* sp. nov.

(Fig. 5A-F, 9A)

**Homomorphous male.** Length 1.3-1.4 mm. Width 0.6 mm.

Body reddish brown, broadened in elytra and abdomen.

Head longer than wide, narrowed anteriorly, widest at just behind eyes, with dense and coarse punctures on dorsal surface, clypeus large, arcuate on anterior margin, frons narrowed, weakly concave, vertex slightly convex, with a pair of clear dorsal tentorial pits, postgenae short and slightly rounded. Eyes small, each ovoid and composed of 15-20 facets. Antennae short, reaching posterior 1/3 of pronotum, 1st segment thick and subcylindrical, weakly expanded internally, 2nd strongly swollen, with a secretory organ at basal 1/4 on its inner surface, 3rd to 8th each very short, 4th to 6th subequal, each subglobose, 7th to 8th slightly transverse, 9th to 10th thick and transverse, 11th largest, ovoid and conical at apex, relative length (width) of each segment from base to apex is 1.5 (1.1): 1.5 (1.3): 0.6 (0.5): 0.5 (0.5): 0.5 (0.5): 0.5 (0.5): 0.4 (0.5): 0.4 (0.5): 0.6 (0.8): 0.7 (1.1): 2.2 (1.5). Maxillary palpi very long, slightly shorter than antennae, 1st segment very short and tubular, 2nd elongate, thickened distally and glabrous, 3rd short, subcylindrical, 4th largest, slightly longer than 2nd, densely pubescent and pedunculate at base, broadened distally in basal 1/3, widest at basal 1/3 then weakly narrowed apically in apical 2/3, with a clear palpal spine at apex.

Pronotum wider than long, widest at anterior 2/5, densely with coarse punctures, with a transverse sulcus and a pair of lateral foveae at posterior 1/4. Elytra slightly wider than long, weakly convex, sparsely punctuate and moderately pubescent, broadened posteriorly, each elytron with 2 basal foveae and 2

indistinct longitudinal sulci. Legs slender, hind tibiae weakly curved internally, each with a short and acute **mucro** at **inner** side of its apex.

Abdomen very short and broad, 4th segment largest, 4.5 times as wide as long, 5th to 8th tergites successively shortened and narrowed, 8th sternite transverse, broadened in median part, appointed at apex, 9th sternite divided into 3 sclerites, median sclerite very small and ovoid, lateral sclerites paired, each broad and quadrangular, with dorsally extending slender ventral strut.

Male genitalia nearly ovoid in ventral view, parameres ventroapically extending and curved internally, confluent in basiventral part, each with 2 apical setae, median lobe bulbous, with small basal **foramen** on ventral side, ovoid membranous part on basidorsal part and an apical process at apex of its apical lobe, endophallus consisting of a pair of elongate spines, each broadened basally, rounded at apex.

**Heteromorphous male.** Unknown.

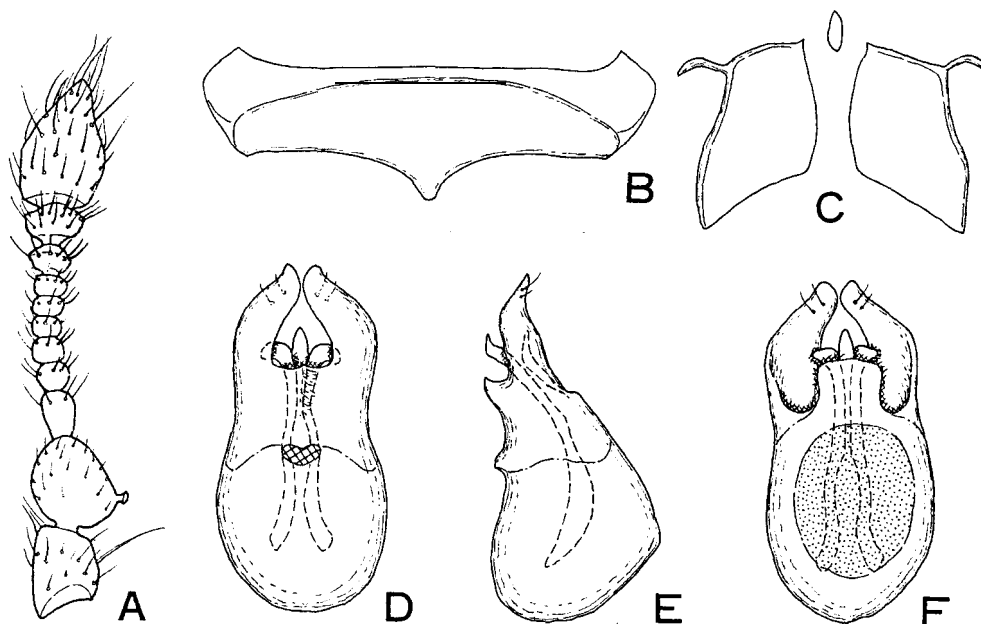
Female. Length 1.3-1.4 mm. Width 0.5-0.6 mm.

Similar to male except for the following characters: Eyes smaller than in male, each composed of 6-7 facets. Antennae resembling to those of male, but 2nd segment smaller than 1st, elongately ovoid.

**Remarks.** *B. hallamontanus* belonging to the subgenus *Bythiniana* Jeannel is closely allied to *B. japonicus* Sharp and *B. gracilipalpis* Jeannel, but is separated from the former by the subglobose second antennal segment, and from the latter by the well-projected secretory organ on the segment.

**Distribution.** Southern Korea (Chejudo Is.).

Holotype: male (deposited in Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo Is., 20. vi. 1990, S. Nomura leg. Paratypes: 4 males 1 female, same locality as holotype, 24. vii. 1990, S. Nomura leg.;



**Fig. 5.** *Bryaxis hallamontanus* sp. nov., male. A, antenna; B, 8th abdominal sternite; C, 9th sternite; D, male genitalia in ventral view; E, ditto, in lateral view, F, ditto, in dorsal view.

4 males 6 females, Kaewol Bridge, Mt. Hallasan, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 3 males 6 females, Orimok, Mt. Hallasan, Chejudo Is., 27. vii. 1990, S. Nomura leg.

Subgenus *Bythoblethus* Reitter

*Bythoblethus* Reitter, 1909, *Farm. Germ.*, Stuttgart: 214; Jeannel, 1950, l. c.: 231 (as subg. of *Arcopagus*); 1958, *Mém. Mus. nat. Hist.*, Paris, (A), 18: 85 (as subg. of *Bryaxis*). Type species: *Arcopagus puncticollis* Denny, designated by Jeannel, 1950.

This subgenus is distinguished from the other subgenera by the strongly swollen first antennal segment sometimes with a well-projected secretory organ and the ovoid or subcylindrical second segment. It differs from the nominotypical subgenus by lacking inner projection on the second antennal segment.

*Bryaxis coreanus* sp. nov.

(Fig. 6A-F, 7A-F, 9B)

Heteromorphous male. Length 1.8 mm. Width 0.7 mm.

Body reddish brown, tarsi light brown, broadened posteriorly.

Head longer than wide, slightly constricted at middle, coarsely punctuate on dorsal surface, clypeus large, arcuately expanded anteriorly, frons narrow, concave at middle, vertex weakly convex, with a pair of clear dorsal tentorial pits just inside of eyes, postgenae broad, slightly rounded with long hairs, genae with a large transverse ventromedian process and excavated on both sides of the process. Eyes large, each ovoid and composed of about 30 facets. Antennae short, reaching anterior half of pronotum, 1st segment widest, strongly swollen internally, with a well-projected secretory organ at inner side of apical part, 2nd subglobose, 3rd ovoid, longer than wide, 4th to 8th subequal, each subglobose, as wide as 3rd, 9th slightly wider than 8th, 10th thick, transverse, 11th narrower than 1st, ovoid and pointed at apex, relative length (width) of each segment from base to apex is 2.2 (1.7) : 1.2 (1.0) : 1.0 (0.7) : 0.6 (0.6) : 0.6 (0.6) : 0.6 (0.6) : 0.6 (0.6) : 0.6 (0.6) : 0.7 (0.9) : 1.0 (1.2) : 2.5 (1.6). Maxillary palpi very long, slightly shorter than antennae, 1st segment very short, subcylindrical, 2nd slender, thickened distally, 3rd short, narrowed at base, 4th largest and pedunculate, 2.7 times as long as wide, widest at basal 1/3, palpal spine slender, about as 1/6 as long as 4th, acute at apex.

Pronotum slightly wider than long, roundly expanded on both sides, densely with coarse punctures, with a transverse sulcus at posterior 1/4. Elytra slightly wider than long, broadened posteriorly, weakly convex and coarsely punctuate, each elytron with 2 basal foveae and 2 longitudinal sulci, outer sulcus short and indistinct. Legs very bold and robust, fore tibiae elongate, each deeply excavated internally in apical 2/7, hind trochanters short, each with an acute and short denticle at posterior side of its apical part, hind tibiae swollen at apical 2/5, each with an acute mucro at apex.

Abdomen short and broad, rounded posteriorly, 4th segment largest, about 5 times as wide as long, 5th to 8th segments successively shortened and narrowed, 8th sternite transverse, broadly expanded at posteromedian margin, 9th sternite composed of 3 sclerites, median sclerite small and ovoid, lateral sclerites paired, each nearly quadrangular, sclerotized and extended on basidorsal part.

Male genitalia well-sclerotized, parameres symmetrical, each narrowed apically, with 2 setae at apex, median lobe bulbous, with an ovoid basal foramen and a large membranous area on dorsal side,

endophallus composed of slender 3 spines, 2 longer spines **subequal** in length, each weakly sinuate, a short spine located at left side of the others, **incurved** and acute at apex.

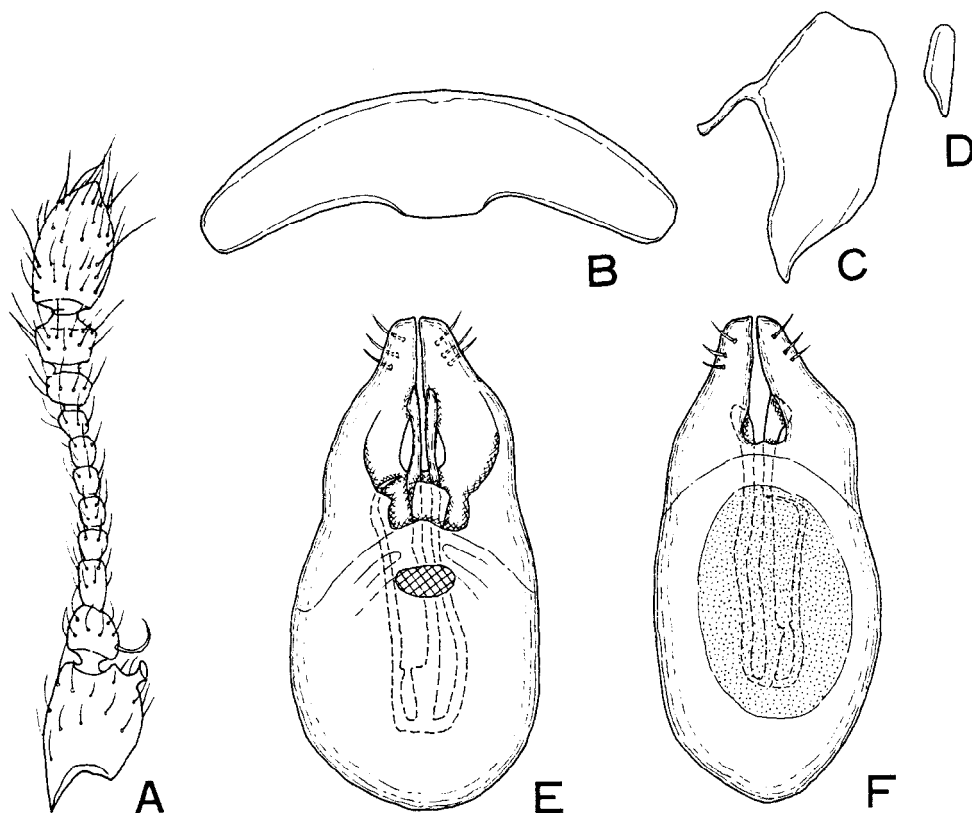
**Homomorphous** male. Length 1.6-1.7 mm. Width 0.7 mm. Similar to heteromorphous male, but distinguished by the smaller body, the smaller and less expanded pronotum and the more slender legs.

Female. Length 1.6-1.7 mm. Width 0.7 mm. Very similar to homomorphous male, but differs by the subcylindrical 1st **antennal** segment without secretory organ.

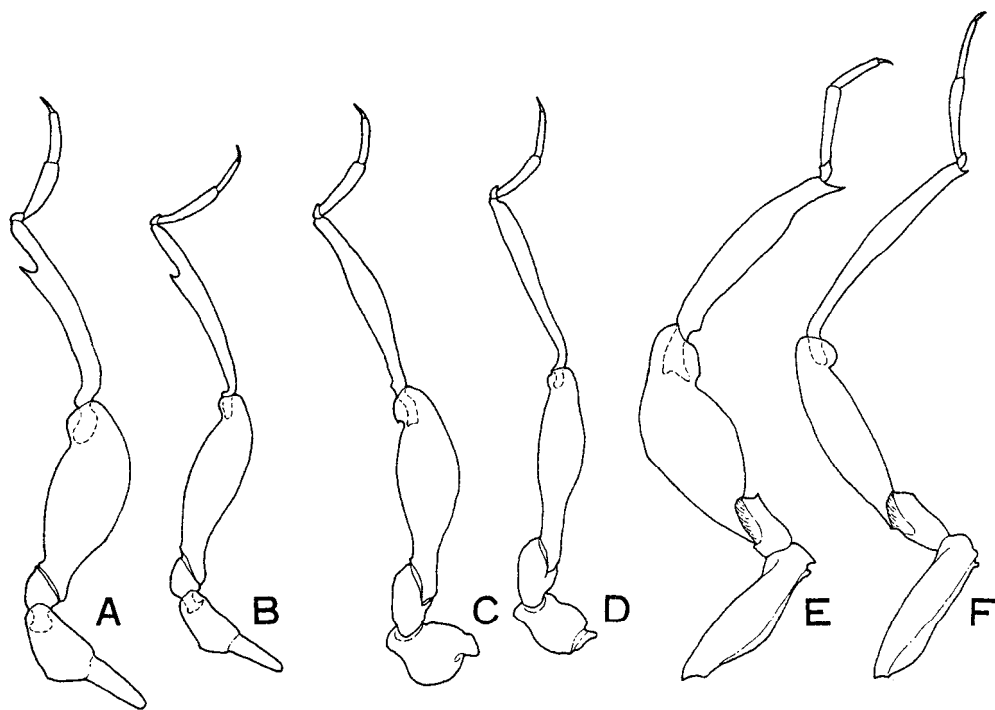
**Remarks.** *B. coreanus* belonging to the subgenus *Bythoblethus* is similar to *B. affinis* Sharp in the coarsely punctate pronotum and strongly swollen first antennal segment, but is easily distinguished from it by the large body and the **apically** broadened secretory organ of the second antennal segment.

**Distribution.** Southern Korea (Chejudo Is.).

**Holotype:** male (deposited in Kungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg. **Paratypes:** 1 male 3 females, same data as holotype; 8 males 2 females, same locality as above, 24. vii. 1991, S. Nomura leg.; 5 males 4 females, Kaewol Bridge, Mt. Hallasan, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 2 males 2 females, Orimok, Mt. Hallasan, Chejudo Is., 27. vii. 1990, S. Nomura leg.; 3 males 8 females, Kuwanun Temple, Mt. Hallasan, Chejudo Is., 29. ix. 1990, S. Nomura leg.



**Fig. 6.** *Bryaxis coreanus* sp. nov., male. A, antenna; B, 8th abdominal sternite; C, 9th sternite, lateral sclerite; D, ditto, median sclerite; E, male genitalia in ventral view; F, ditto, in dorsal view.



**Fig. 7.** *Bryaxis coreanus* sp. nov. A, C, E, heteromorphous male; B, D, F, homeomorphous male. A, B, fore leg; C, D, mid leg, E, F, hind leg.

Tribe **Tychini** Raffray

Germes **Tychus** Leach

*Tychus* Leach, 1817, *zool. Misc.*, 3: 84; **Aubé**, 1833, *Psel. Mon.*: 42; Reitter, 1881, *Verh. z. b. Ges. Wien*, 31: 454; **Guillebeau**, 1888, *Rev. Ent.*, 7: 368, Peyerimhoff, 1904, *Abs.*, 30: 169; Raffray, 1904, *Ann. Soc. ent. Fr.*, 73: 412; 1908, *Col., Psel., Gen., Ins.*: 291; 1911, *Psel., Coleopt. Cat.*, (27): 128; Doderò, 1919, *Ann. genova*, 48: 225; **Jeannel**, 1950, *Col. Psel., Farm. Fr.*, 53: 332; 1956, *Mém Mus. nat. Hist., Paris*, 14: 131; 1958, *ibid.* (*Sér. A, Zool.*), 18(1): 105; Chandler, 1988, *Trans. Amer. ent. Soc.*, 114: 154; Newton & Chandler, 1989, *Field. Zool.*, N. S., (53): 53. **Type** species: *Pselaphus niger* Reichenbach, by **monotypy**.

*Tychoides* Karaman, 1955, *Acta Mus. mac. sci. nat.*, Skopje, 3: 124.

***Tychus dichotomus* sp. nw.**

(Fig. 8A-G)

**Male.** Length 1.4 mm. Width 0.5 mm.

Body reddish brown and shiny, maxillary **palpi** light brown, broadened posteriorly, covered with longhairs.

Head slightly longer than wide, narrowed anteriorly, **clypeus** very short, invisible in dorsal view, **frons** heightened to make a pair of **antennal** tubercles, vertex convex, with a pair of small dorsal **tentorial** pits just inside eyes, postgenae narrow and rounded. Eyes small, each ovoid and composed of about 20 facets. Antennae elongate, 1st to 2nd segments thick and subcylindrical, 3rd to 7th moniliiform, each ovoid and transverse, 8th to 10th subcylindrical, 9th and 10th distinctly thick, 11th largest, **subcylindrical** in basal part, subconical in apical part, relative length (width) of each segment from base to apex is 1.3 (1.0) : 1.0 (0.9) : 0.7 (0.8) : 0.6 (0.7) : 0.5 (0.7) : 0.5 (0.8) : 0.6 (0.9) : 0.9 (1.2) : 1.0 (1.5) : 2.5 (1.7). Maxillary **palpi** short, 1st segment short and tubular, 2nd elongate, thickened distally, 3rd nearly triangular, roundly expanded on its inner side, slightly expanded on outer side, 4th largest and ovoid, twice as long as wide.

Pronotum transverse, roundly expanded laterally, almost glabrous on dorsal surface, with a pair of **basilateral** foveae at basal 1/7. Elytra wider than long, weakly broadened posteriorly, sparsely punctate, each elytron with 2 large basal foveae and 2 shallow and subparallel sulci, outer **sulcus** running from outer fovea to middle of elytron. **Legs** slender and short.

Abdomen short and broad, rounded posteriorly, 4th segment largest, with a transverse basimedian depression and well-demarcated paratergites, 5th to 8th successively shortened and narrowed distally, 8th tergite trapezoid, weakly convex, 8th sternite very short, and transverse, 9th sternite divided into 3 sclerites, median sclerite nearly pentagonal, lateral sclerites paired, each trapezoid with a long ventral

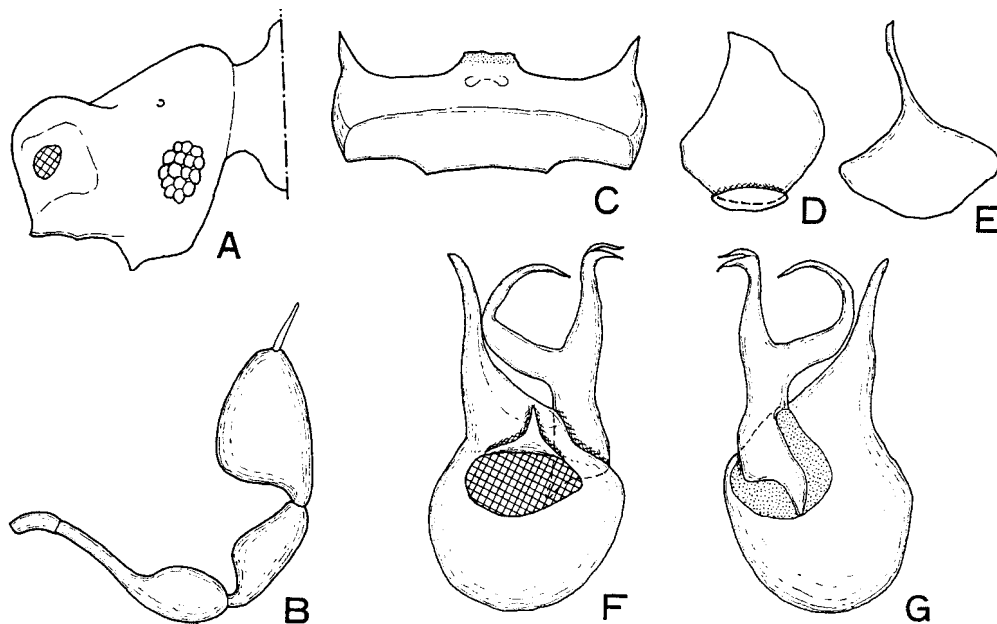


Fig. 8. *Tychus dichotomus* sp. nov., male. A, cranium in lateral view; B, maxillary **palpus**; C, 8th abdominal sternite; D, 9th abdominal sternite, median sclerite; E, ditto, lateral sclerite; F, male genitalia in ventral view, G, ditto, in dorsal view.



strut at basiventral part.

Male genitalia consisting of only median lobe, median lobe bulbous on basal part, with a large and ovoid basal **foramen**, a short spine attached at apical margin of the basal **foramen** and an elongate apical spine, dorsal apophysis located on right side of the apical spine, bifurcate and slender with 2 acute spines, right spine hook-shaped rightward at apex, **left** spine arcuately curved outward to closed to right spine at apex.

Female. Length 1.4 mm. Width 0.5 mm. Very similar to male excepting the membranous and externally invisible ninth abdominal sternite.

Remarks. This new species is similar to the other species of this genus, but it differs by the bifurcate dorsal apophysis of the median lobe of male genitalia, which is having a hooked right spine and an arcuately curved left spine.

**Distribution.** Southern Korea (Chejudo Is.).

Holotype: male, (deposited in Kyungpook Nat. Univ.) Yongshil, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg. Paratypes: 1 female, same locality as holotype, 24. vii. 1990, S. Nomura leg.; 1 female, Kaewol Bridge, Mt. Hallasan, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 1 male 2 females, Orimok, Mt. Hallasan, Chejudo Is., 27. vii. 1990, S. Nomura leg.

#### Genus *Atychodea* Reitter

*Atychodea* Reitter, 1884, Verh. Kais.-Königl. Zool.-Bot. Ges., Wien, 33: 412; Raffray, 1904, Arm. Soc.

ent. Fr., 73: 418; 1908, Col., Psel., Gen., Ins.: 294; 1911, Psel., Coleopt. Cat., (27): 132, Chandler, 1988, Trans. Amer. ent. Soc., 114: 156; Newton & Chandler, 1989, Field. Zool., N. S., (53): 53.

This genus is very characteristic in the tribe Tychini for the elytra each with three basal foveae and the clearly symmetrical aedeagus. Chandler (1988) regarded the feature as an ancestral character of this tribe. Whereas this genus has ever been known only in Borneo, it is also distributed in Northern Asia.

#### *Atychodea insulicola* sp. nov.

(Fig. 9C, 10A-H)

Male. Length 1.7 mm. Width 0.6 mm.

Body reddish brown, **maxillary palpi** light brown, weakly broadened in elytra and abdomen.

Head longer than wide, narrowed anteriorly, **clypeus** very short, invisible in dorsal view, frons strongly expanded to form a pair of anternal tubercles, constricted behind the tubercles, vertex slightly convex, dorsally, strongly convex posteriorly, minutely punctuate, with a pair of dorsal tentorial pits at anterior level of eyes, distant from eyes about 3 oceller diameters, postgena large and flat, covered with long hairs, ventral hook located at center of ventral surface of head, acute and arcuately curved proximally. Eyes large and convex, each ovoid and composed of about 20 facets. Antennae elongate, reaching hind margin of pronotum, 1st to 2nd segments thick and each subcylindrical, 3rd to 7th **subequal** in width, moniliform, 8th to 10th successively enlarged, each ovoid, 11th largest, nearly ovoid in basal part, pointed at apex, relative length (width) of each segment from base to apex is 1.5 (1.1) : 1.1 (1.0) : 1.0 (0.8) : 0.8 (0.8) : 0.9 (0.8) : 0.8 (0.8) : 0.8 (0.8) : 0.7 (0.9) : 1.2 (1.2) : 1.2 (1.5) : 3.1 (2.0). Maxillary **palpi** very long, 1st segment

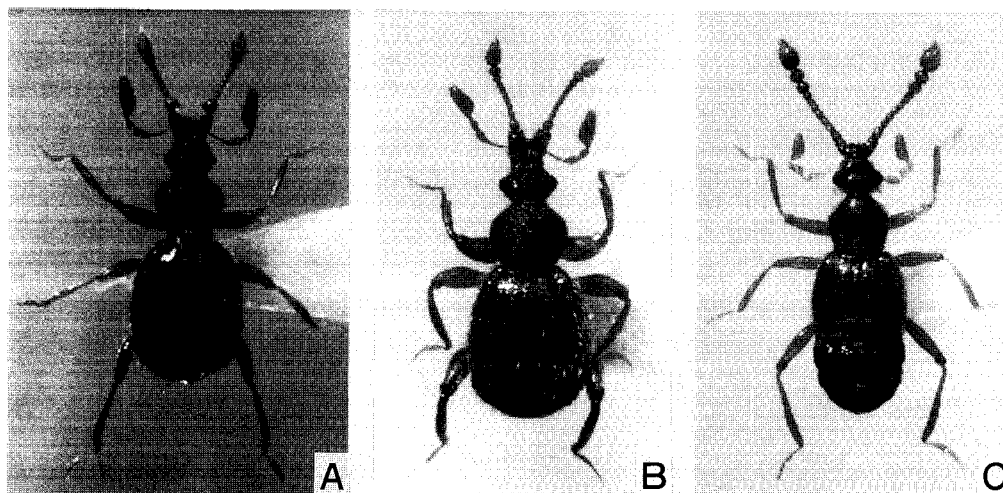
short and tubular, 2nd elongate, strongly thickened on apical part, 3rd short, very slender at base, inner margin angularly expanded, outer margin weakly concave, with a short **seta** at apex, 4th widest, strongly narrowed at base, strongly broadened at basal  $1/3$ , then weakly narrowed **apically**, **palpal** spine long and slender,  $1/3$  times as long as 4th segment.

Pronotum slightly wider than long, widest at basal  $4/9$ , roundly expanded on both sides, convex and coarsely punctuate on dorsal surface, with a pair of lateral foveae at basal  $1/4$ . Elytra wider than long, weakly convex and coarsely punctuate, slightly broadened posteriorly, each elytron with 2 basal foveae and 2 longitudinal **sulci**, outer **sulcus** running from outer basal fovea to middle of elytron. Metasternum broad, with a pair of ventral projections between **meso-** metacoxae. Legs slender, hind trochanters short, each with a ventral projection at basal part.

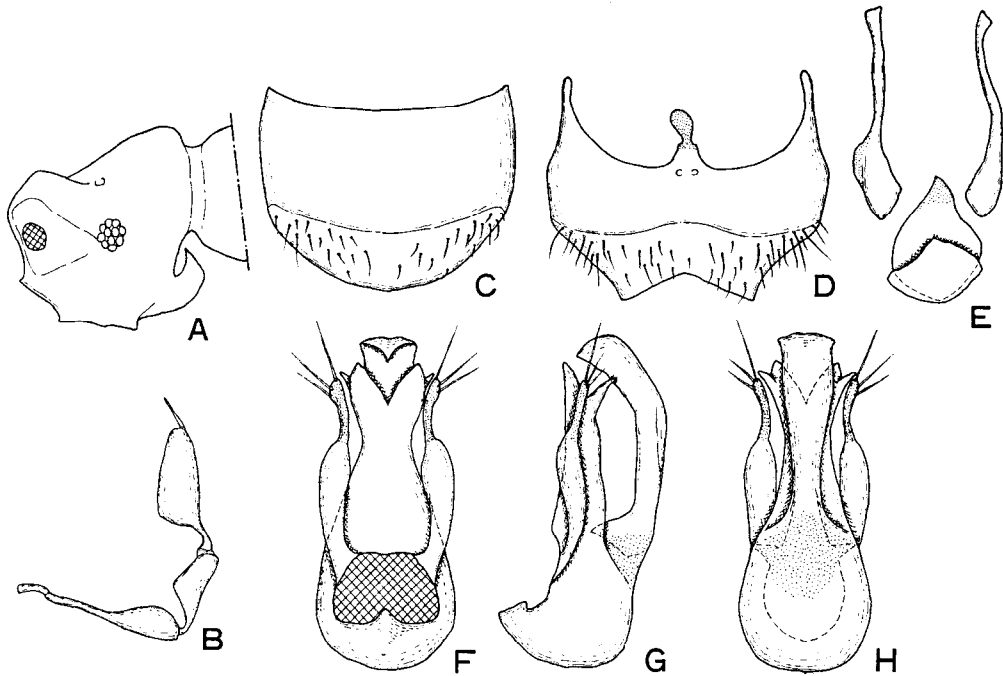
Abdomen weakly narrowed posteriorly, 4th segment largest, with 2 pairs of dorsolateral foveae and a dorsomedian depression, 5th slightly shorter than **4th**, transverse, 6th as long as **5th**, narrower than **5th**, 7th tergite semicircular in dorsal view, slightly longer than **6th**, 8th tergite clearly smaller than the foregoing segment transverse in external view, 8th **sternite angularly** excavated on apical margin, with a pair of internal extensions on both lateral part, a pair of ventromedian foveae and a membranous sac (rudiment of the defensive gland) at basimedian margin, 9th sternite composed of 3 sclerites, median sclerite small and nearly ovoid, lateral sclerites paired, each elongate, slender on basal part and broadened distally.

Male genitalia symmetrical, parameres paired, each elongate and divided into basal sclerite and apical membrane, basal sclerite weakly broadened distally, apical membrane attached to proximal side of apex of basal sclerite, with 3 long setae at apex; median lobe consisting of basal bulb and dorsal apophysis, basal bulb extended and narrowed distally, **bifurcate** and broadened at apex, with a large and transverse basal **foramen** and a large and well-projected ventral process, dorsal apophysis narrowed on middle part, acutely projected just in **front** of apex of basal bulb.

Female. Length 1.5-1.6 mm. Width 0.6 mm. Similar to male, differs in the following features: Eyes much smaller than in male, each composed of about 10 facets, pronotum **almost** flat between **meso-**



**Fig. 9.** A. *Bryaxis hallamontanus* sp. nov., homeomorphous male; B, *B. corcanus* sp. nov., heteromorphous male; C, *Atychodea insulicola* sp. nov., male.



**Fig. 10.** *Atychodea insulicola* sp. nov., male. A, cranium in lateral view; B, maxillary palpus; C, 8th abdominal tergite; D, 8th sternite; E, 9th sternite; F, male genitalia in ventral view; G, ditto, in lateral view; H, ditto, in dorsal view.

metacoxae, hind trochanters flat on basal part, 8th sternite arcuate on apical margin, 9th sternite membranous.

**Remarks.** This Korean species is very distinct in this genus in having the arcuately curved hook at the middle of the ventral surface of the head. It is also similar to *Tychus dichotomus* in appearance, but the body is larger, the third **palpal** segment larger and angular and the elytra has three pairs of foveae.

**Distribution.** Chejudo Is.

**Holotype:** male (deposited in Kyungpook Nat. Univ.), Yongshil, Mt. Hallasan, Chejudo Is., 20. v. 1990, S. Nomura leg. **Paratypes:** 1 female, same locality as holotype, 24. vii. 1990, S. Nomura leg.; 1 female, Kaewol Bridge, Mt. Hallasan, Chejudo Is., 26. vii. 1990, S. Nomura leg.; 1 male 2 females, Orimok, Mt. Hallasan, Chejudo Is., 27. vii. 1990, S. Nomura leg.

### Subfamily PSELAPHINAE

#### Tribe *Pselaphini* s. str.

#### Genus *Dicentrius* Reitter

*Dicentrius* Reitter, 1882, Verh. Naturf. Ver. **Brünn**, 20: 208; Raffray, 1904, Arm. **Soc. ent Fr.**, 73: 452; 1908, Col. **Psel.**, Gen. Ins.: 308; 1911, **Psel.**, Coleopt., Cat., (27): 139; Newton & Chandler, 1989, Field., Zool., N. S., (53): 62. Type species: *Pselaphus merklü* Reitter, by monotypy.

*Pselaphogenius* Reitter, 1910, Wien. ent. **Zeit.**, 29: 155 (subgenus); Jeannel, 1950, Col. **Psel.**, **Faun. Fr.**, 53: 421 (subgenus); Besuchet, 1961, Eos, 37(3): 257 (ranked up to the genus); Newton & Chandler, 1989, l. c.: 62 (synonymized). Type species: *Pselaphus quadricostatus* Reitter, designated by Jeannel, 1950.

*Pselaphodinus* Jeannel, 1950, Col. **Psel.**, **Farm. Fr.**, 53: 389 (subgenus); Besuchet, 1961, l. c.: 257 (synonymized). Type species: *Pselaphus longipalpis* Kiesenwetter, by original designation.

*Dicentrius* sp.

(Fig. 11A)

**Remarks.** Only a female was collected from Chejudo Island, and it is impossible to identify it into species.

**Specimen examined:** 1 female, Yongshil, Mt. Hallasan, Chejudo Is., 24. vii. 1990, S. Nomura leg.

### Subfamily CLAVIGERINAE

Tribe **Clavigerini** sensu Besuchet, 1991

#### Genus *Diartiger* Sharp

*Diartiger* Sharp, 1883, Trans. ent **Soc.** London, 1883: 329; Raffray, 1904, Arm. **Soc. ent Fr.**, 73: 585; 1908, Col. **Psel.**, Gen. Ins.: 437; 1911, **Psel.**, Coleopt., Cat., (27): 176; Jeannel, 1958, **Mém. Mus.** nat. Hist., Paris, **Sér. A**, Zool., 18(1): 125; Newton & Chandler, 1989, Field. **Zool.**, N. S., (53): 64. Type species: *Diartiger fossulatus* Sharp, designated by Lucas, 1920.

*Microdiartiger*, K. Sawada, 1964, Ent. Rev. Japan, 17: 12; Besuchet, 1986, Rev. Suisse **Zool.**, 93(1): 263 (synonymized). Type species: *Microdiartiger japonicus* Sawada, by monotypy.

*Coiffaitius*, Karaman, 1969, Biol. Gallo-Hellenica, 2: 50; Besuchet, 1986, l. c.: 263 (synonymized). Type species: *Coiffaitius ispartae* Karaman, by monotypy.

#### *Diartiger dcentipes* sp. nov.

(Fig. 11B, 12A-E)

**Male.** Length 2.0-2.1 mm, Width 0.8 mm.

Body reddish brown, narrowed anteriorly & broadened and rounded posteriorly.

Head longer than wide, rectangular in dorsal view, clypeus very short, slightly broadened anteriorly, nearly arcuate on anterior margin, frons strongly convex, densely punctate, with a pair of dorsal tentorial pits just behind eyes, tempora subparallel-sided. Eyes convex, each ovoid, and composed of about 20 facets. Antennae short and 3-segmented, 1st segment short and cylindrical, 2nd elongate, about as wide as 1st, narrowed basally, 3rd largest, slightly longer than 1st + 2nd, gradually thickened distally,

truncate at apex.

Pronotum subglobose and densely punctuate, with a basimedial fovea at basal  $1/5$  and a shallow longitudinal depression around basimedial fovea. Elytra nearly trapezoid, weakly convex and angularly emarginate on anterior margin, each elytron with a large fringe at outer part of hind margin. **Metasternum** flattened on posteromedian part, covered with long hairs along ventromedian line. Legs short and slender, sparsely setose, mid trochanters large, each broadened distally with a large and truncate spine on ventral side, mid femora weakly incurved, each with a small denticle at basal  $1/4$ , mid tibiae flattened on both inner and outer sides, each with a **small** denticle at apical  $2/5$  of inner side.

Abdomen widest, consist of composite tergites (3rd to **6th**), 7th and 8th tergites on dorsal side and 3rd to 8th sternites on ventral side, composite tergites predominantly large, shiny and sparsely setose, deeply concave in basal part and convex on posterior part, with 3 pairs of trichomes and 2 pairs of short **sulci**, outer trichome nearly triangular, located at basilateral corner, middle trichome just behind elytral trichome, hook-shaped, inner trichome transverse, located between fore and hind pairs of sulci, 7th tergite short and transverse, arcuate on anterior margin 8th tergite nearly circular.

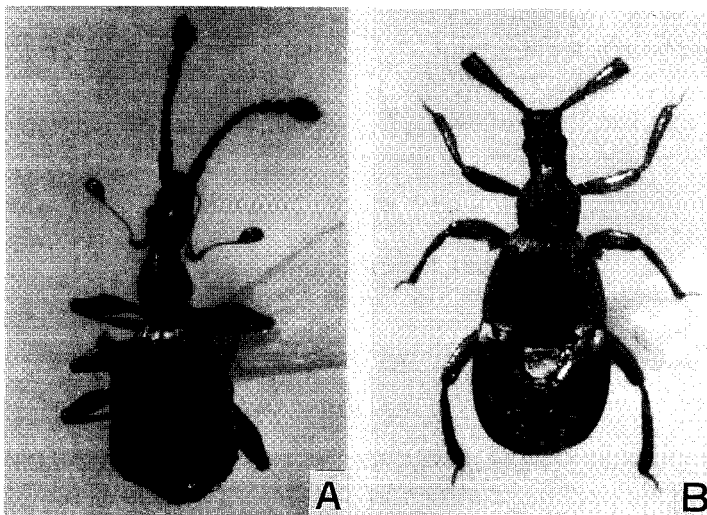
Male genitalia strongly sclerotized and symmetrical; median lobe subparallel-sided on apical part, rounded on basal part, broadly excavated longitudinally, with a small and trapezoid extension at apex, basal **foramen** projected ventrally, its apical margin with a pair of short projections, basal margin strongly projected to form a crescent lobe, basal bulb with a large and ovoid membranous part and elongate sclerite at center of membranous part.

Female. unknown

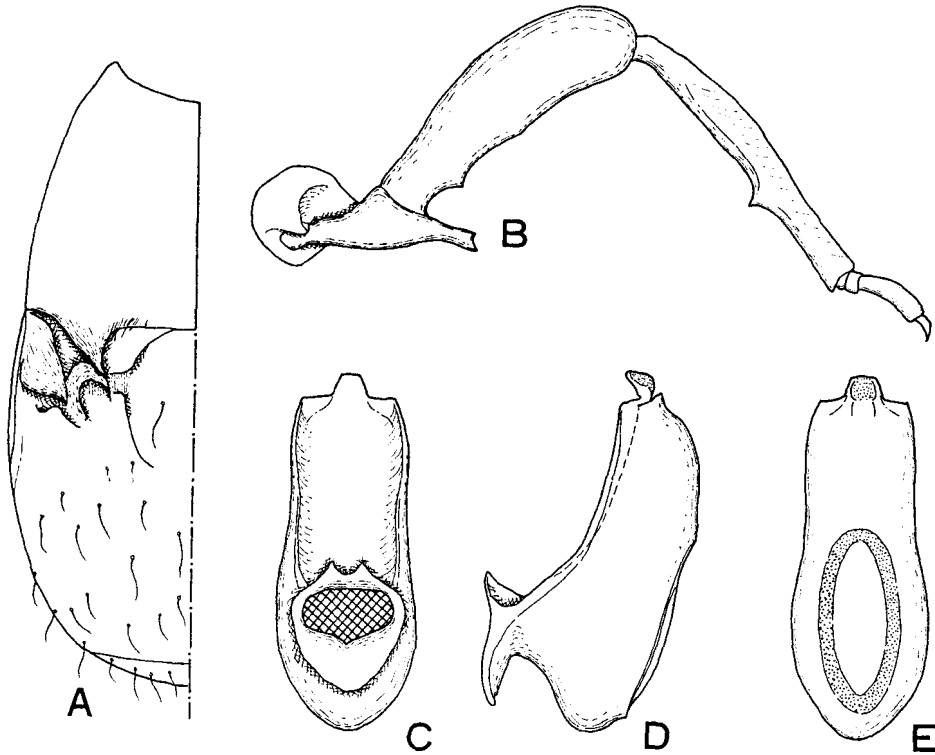
Remarks. This species is allied to the Japanese species, *D. fossulatus* Sharp and *D. ispartae* (Karaman), but the new species differs from the others by the mid trochanters each with a long and truncate spine and the mid tibiae each with two small denticles on the posterior side.

Distribution. Southern Korea (Chejudo Is.).

Holotype: male (deposited in **Kyungpook** Nat. Univ.), Orimok, Mt. Hallasan, Chejudo Is., 20. v. 1990,



**Fig. 11.** A, *Dicentrius* sp., female; B, *Diartiger dentipes* sp. nov., male.



**Fig. 12.** *Diartiger dentipes* sp. nov., male. A, elytra and abdomen, left side; B, mid leg; C, male genitalia in ventral view; D, ditto, in lateral view; E, ditto, in dorsal view.

S. Nomura leg. Paratype: 1 male, same data as holotype.

### Acknowledgements

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